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Phospho-Thr286 CaM Kinase II Antibody

Affinity purified rabbit polyclonal antibody
Catalog # AN1001

Specification

Phospho-Thr286 CaM Kinase II Antibody - Product Information

Application	**WB**
Primary Accession	P11275
Reactivity	**Rat**
Predicted	**Human, Mouse, Xenopus**
Host	**Rabbit**
Clonality	**polyclonal**
Calculated MW	**50/60 KDa**

Phospho-Thr286 CaM Kinase II Antibody - Additional Information

Gene ID	**25400**
Gene Name	**CAMK2A/B**

Other Names
Calcium/calmodulin-dependent protein kinase type II subunit alpha, CaM kinase II subunit alpha, CaMK-II subunit alpha, Camk2a

Target/Specificity
Synthetic phospho-peptide corresponding to amino acid residues surrounding Thr286 conjugated to KLH.

Dilution
WB~~ 1:1000

Format
Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity
Specific for the ~50k α-CaM Kinase II and the ~60k β-CaM Kinase II proteins phosphorylated at Thr286. Immunolabeling is blocked by the λ-phosphatase treatment.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Phospho-Thr286 CaM Kinase II Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

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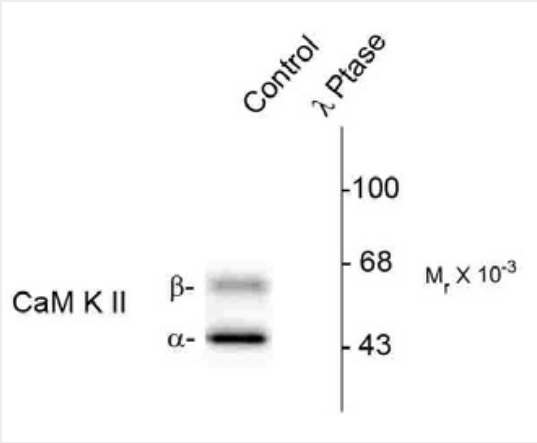
Phospho-Thr286 CaM Kinase II Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Phospho-Thr286 CaM Kinase II Antibody - Images



Western blot of rat brain lysate showing specific immunolabeling of the ~50k α- and the ~60k β-CaM Kinase II phosphorylated at Thr286 (Control). The phosphospecificity of this labeling is shown in the second lane (lambda-phosphatase: λ-Ptase). The blot is identical to the control except that it was incubated in λ-Ptase (1200 units for 30 min) before being exposed to the Anti-Thr286 CaM Kinase II. The immunolabeling is completely eliminated by treatment with λ-Ptase.

Phospho-Thr286 CaM Kinase II Antibody - Background

Ca2+/calmodulin-dependent protein kinase II (CaM Kinase II) is a multi-functional calcium and calmodulin-dependent protein kinase that mediates cellular responses to a wide variety of intercellular signals (Kennedy, 1998; Schulman and Hanson, 1993). CaM Kinase II has been shown to regulate diverse cellular functions including synaptic plasticity, neurotransmitter synthesis and release, gene expression, ion channel function, carbohydrate metabolism, cytoskeletal function, and Ca2+-homeostasis (Gleason et al., 2003; Soderling, 2000; Hudmon and Schulman, 2002). Phosphorylation of Thr286 on the kinase produces an autonomously active form of CaM Kinase II (Meng et al., 2003; Picciotto et al., 1993). Autophosphorylation of Thr305 inhibits the activity CaM Kinase II. Phosphorylation at this site appears to reduce the association of CaM Kinase II with the PSD and reduce LTP and learning (Elgersma et al., 2002).

Phospho-Thr286 CaM Kinase II Antibody - References

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